

GIA industri ab

Box 59, S-772 22 Grängesberg, Sweden

ZUSATZ-HALTEBREMSE

Federbetätigt, pneumatisk geöffnet (1)

Bremskraft: 9.460 (N) - 0 bar
 Bremsmoment: 2.080 (Nm) - \varnothing 500x12,5 Bremscheibe (2)
 Öffnungsdruck: Max. 6 bar, aufbereitete Druckluft
 Nachstellfrei: Über Standzeit der Reibbeläge
 Handöffnung: Durch Anordnung (C)

zur Unterstützung der Radklotzbremsen (3)
 bei Lokomotiven (4)

Gewicht: 40 ton
 Geschwindigkeit: 40 km/h
 Antrieb: Deutz Dieselmotor 155 kw (5)

für Tunnelbau, Bergwerke, Rangierbetrieb
 durch Anbau am Verteilerausgang des Last-
 und Wendegetriebes (6) Fabrikat Clark.

FREIN de MAINTIEN AUXILIAIRE

commande par manque de pression, desserrage
 pneumatique (1)

Force de freinage: 9.460 (N) - 0 bar
 Couple de freinage: 2.080 (Nm) - \varnothing 500x12,5 disque (2)
 Pression d'ouverture: 6 bar maxi., d'air comprimé et préparé
 Sans rajustage: Pendant la vie de la garniture de frein
 D'ouverture manuelle: Par dispositif (C)

pour aider les freins à sabot de roues (3)
 des locomotives (4)

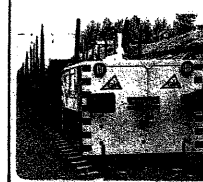
Poids: 40 tonnes
 Vitesse: 40 km/h
 Entraînement: Moteur Deutz Diesel 155 kw (5)

dans la construction de tunnels,
 l'exploitation minière, le locolateur pour
 le service de manœuvre

l'assemblage par bride boulonnées au arbre de
 sortie du engrenage distributeur de la boîte
 vitesse d'inversion (6) d'exécution Clark.

**Railbound equipment
 our speciality**

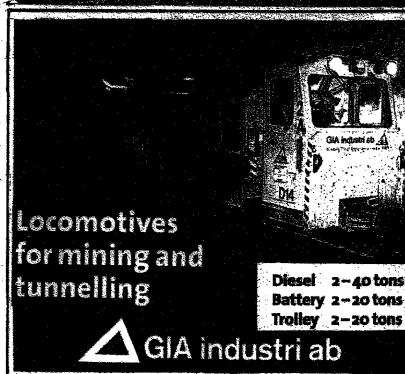
Shunter



Shunting locomotive



Service vehicle
 Equipped according
 to customers request



Locomotives
 for mining and
 tunnelling

Diesel 2-40 tons
 Battery 2-20 tons
 Trolley 2-20 tons

GIA industri ab

TILLSATS-HÅLLBROMS LTF4x100
 Fjädermanövrerad, pneumatiskt lättad (1)

Bremskraft: 9.460 (N) - 0 bar
 Bremsmoment: 2.080 (Nm) - 500x12,5 bromskiva (2)
 Lättningstryck: Max 6 bar, förbehandlad tryckluft
 Justerfri: Över beläggens livslängd
 Manuell öppning: Genom anordning (C)

för att stödja hjulklossbromsar (3) vid
 lokomotiv (4)

Vikt: 40 ton
 Hastighet: 40 km/h
 Drivning: Deutz Dieselmotor 155 kw (5)

för tunnelbygge, gruvbrytning, växling
 av järnvägsagnar

genom påflänsning till fördelarväxelns
 utgång av reverserbara power shift
 transmissionen (6) fabrikat Clark.

AUXILIARY HOLDING BRAKE
 spring applied, pneumatically released (1)

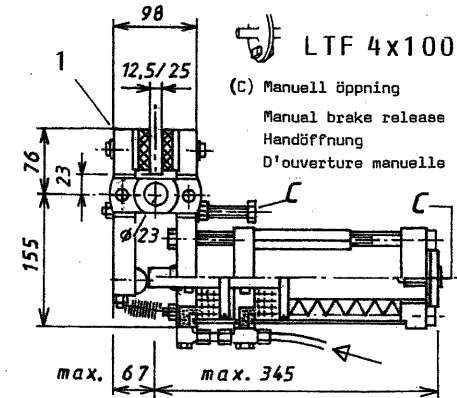
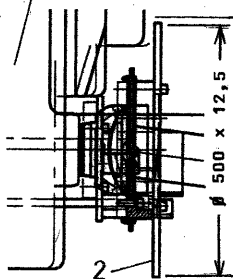
Braking force: 9.460 (N) - 0 bar
 Braking torque: 2.080 (Nm) - 500x12,5 brake disc (2)
 Release pressure: Max. 6 bar, prepared compressed air
 Adjustment-free: Over friction lining life
 Manual brake release: Provided (C)

to support wheel shoe brakes (3) at
 locomotives (4)

Weight: 40 tons
 Speed: 40 km/h
 Propulsion: Deutz Diesel engine 155 kw (5)

for tunnelling, mining, shunting or
 switching

by flange mounting to transfer case output
 shaft of reversible power shift transmission
 (6) fabricate Clark.



LTF 4x100
 (C) Manuell öppning
 Manual brake release
 Handöffnung
 D'ouverture manuelle

Fjädermanövrerad, pneumatiskt lättad
 Nom bremskraft 9.460 (N) - justerfri

Spring applied, pneumatically released
 Nom. braking force 9.460 (N) - adjustment-free

Federbetätigt, pneumatisk geöffnet
 Nennbremskraft 9.460 (N) - nachstellfrei

Commande par manque de pression,
 desserrage pneumatique
 Force de freinage nomi. 9.460 (N) - sans rajustage

Antal Number	Det. nr	Benämning Name	Material	Dim.	Anm. Comment
B	A	Konstr./Des. Ritad Drawn HV	Kontr. Control	Skala Scale	Erätter/Replace Ers. av/Replaced by
Tillsats-Växellådsbroms Auxiliary Transmission Shaft Brake					VME BROMSTEKNIK Brake Engineering Falun - Sweden
Zusatz-Getriebebremse Frein à l'engrenage auxiliaire					
Denna ritning är vår egendom och får ej utan vårt medgivande ändras, kopieras, användas för tillverkning eller delgivas annan person eller firma.			This drawing is our property and shall not without our permission be altered, copied, used for manufacturing or communicated to any other person or company.		

sedan 1983
 Konstruktör + Tillverkare av Bromsfångare
 för
 BANDBEHANDLING, KABELMASKINER, VINSCHAR
 TRÄARBETNING, SÅGVERK, TUNGA FORDON
 ELMOTOR DRIFTER, BROMS, PROVBÄNKAR
 LINJÄRA RÖRELSER, POSITIONERING, HÅLLNING
 VME BROMSTEKNIK
 VME SE-791 47 FALUN-Sverige
 Kontor Tel./Fax 023-345 10
 Verkstad Tel 023-770 410

Underground locomotive carriage

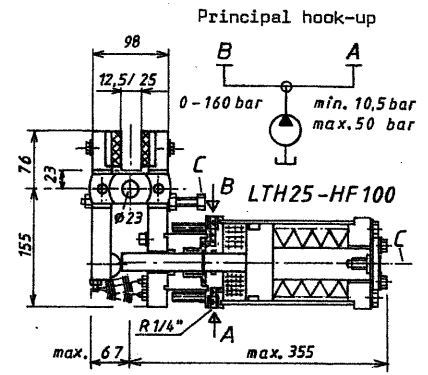
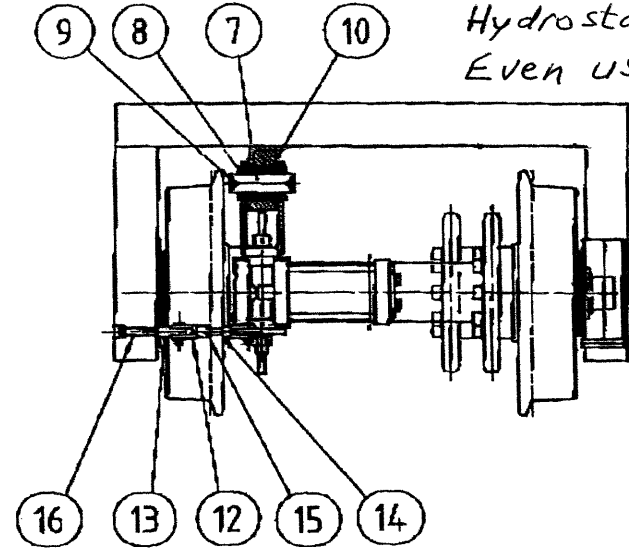
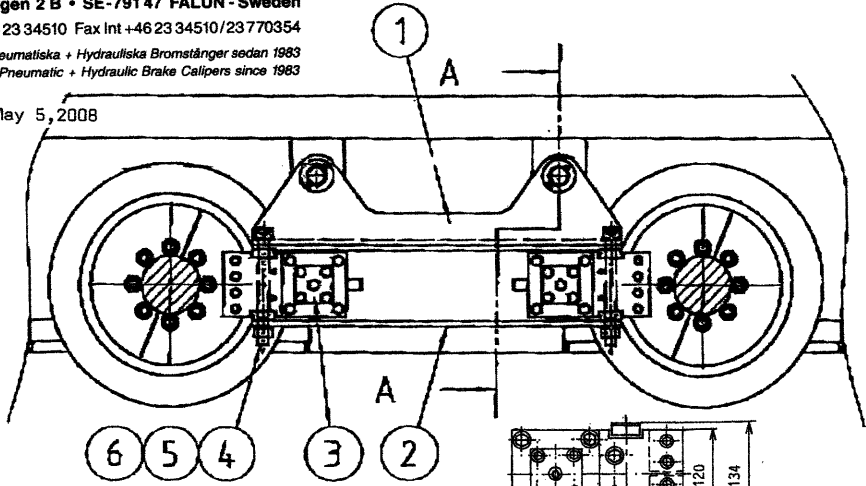
Weight 5 ton
Max. speed 12 km/h

power train
A-A Deutz Diesel engine 42 kw
Hydrostatic transmission
Even used for primary or service braking duties

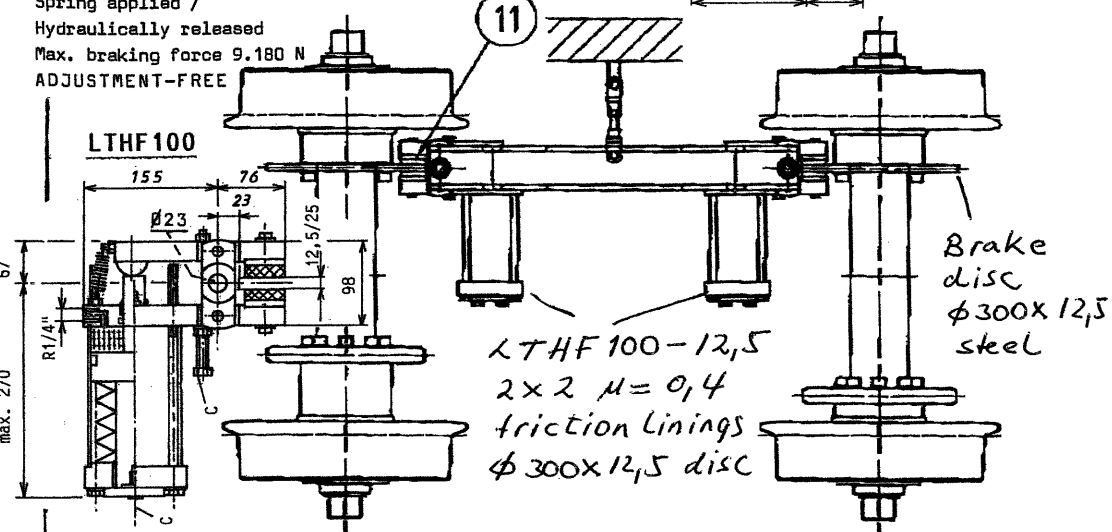
VME BROMSTEKNIK
BRAKE ENGINEERING
Rotary + Linear Motion Control

VME • Vallvägen 2 B • SE-791 47 FALUN - Sweden
Phone Int + 46 23 34510 Fax Int + 46 23 34510/23 770354
Tillverkare av Pneumatiska + Hydrauliska Bromstänger sedan 1983
Manufacturer of Pneumatic + Hydraulic Brake Calipers since 1983

Rev. May 5, 2008



FAILSAFE
brake LTHF100
Spring applied /
Hydraulically released
Max. braking force 9.180 N
ADJUSTMENT-FREE



LTHF 100-12,5
2 x 2 μ = 0,4
friction linings
φ 300 x 12,5 disc
Brake disc
φ 300 x 12,5 steel

Wheel mounted spring applied /
hydraulically released caliper brakes,
type LTHF 100 for emergency braking
and holding duties. Adjustment-free

GRUVLOK	11087	Alternative installation
Hydraulisk Hjul-fjädertrycksbroms	11112	TwoStopp brake LTH25-HF100
Med påbyggd driftsbroms till höger	10989	Proportionate braking 0 - 160 bar,
MINE LOCOMOTIVE	19150	max. braking force 11.680 N
Hydraulic spring applied wheel brake	19149	Emergency/Parking feature incor-
With integrated service brake at right	19713	porated, max. braking force 9.180 N
UNTERTAGE- BERGBAULOKOMOTIVE	19246	ADJUSTMENT-FREE
Hydraulische Rad-Federdruckbremse	14551	
Mit angebaute Betriebsbremse rechts	12930	
LOCOMOTIVE de FOND	-106287-1	0.9 kg
Frein sur roue hydraulique à ressort.	11520	
Avec frein de service intégré à droit	12120	

4	3	DRD 21x21x2 120		
2	4	MC6S 20x200-12.9	900260	
2	3	Bromsklove/Brake yoke	995587	25 kg
1	2	Stag/Rod	106985-1	4.8 kg
1	1	Bromskonsol/Bracket	106984-A	17 kg
Art	Del.-nr	Dimension/Bezeichnung	Material/Ritn.nr/Art nr	Anm.
A				

Ritningen MAKULERAS efter avslutad projekt

Tolerans SS-ISO 2768-medel om ej annat angivits Skarpa kanter brytes

VME BROMSTEKNIK Brake Engineering Falun - Sweden

Skala 1:10

Brämssystem/Brake system Sammanställning/Assemlly

75 kg

106983.dwg 040623

Dwg. 106983

GIA Industri AB Box 58, S-772 22 Bränsjö, Sweden

Nr	Ändring	Ändrad av/Car medd. av	Datum	Lfd.	Gråk.
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Case study: Stoppage of Iron Ore Freight Car

Laden = 100 ton
 Max. speed = 100 km/h
 Deceleration = 0,5 m/s² through
 Braking time = 56 sec service
 Stopping distance = 773 m brake

Unladen = 30 ton
 Max. speed = 120 km/h

Selected brake type LTLF100

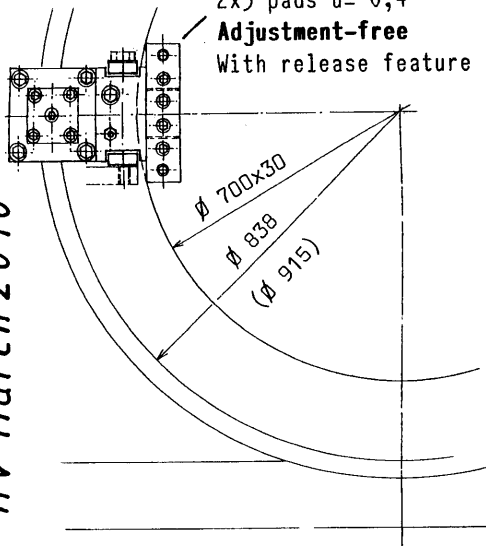
Pneumatic combined Service and Safety
TwoStopp Brake, 1 off each wheel

Applied air pressure 7 bar at **Service Brake** during stoppage
 Hold off pressure at **Safety Brake** 4,5 bar - for subsequent parking 0 bar release pressure for max. braking force

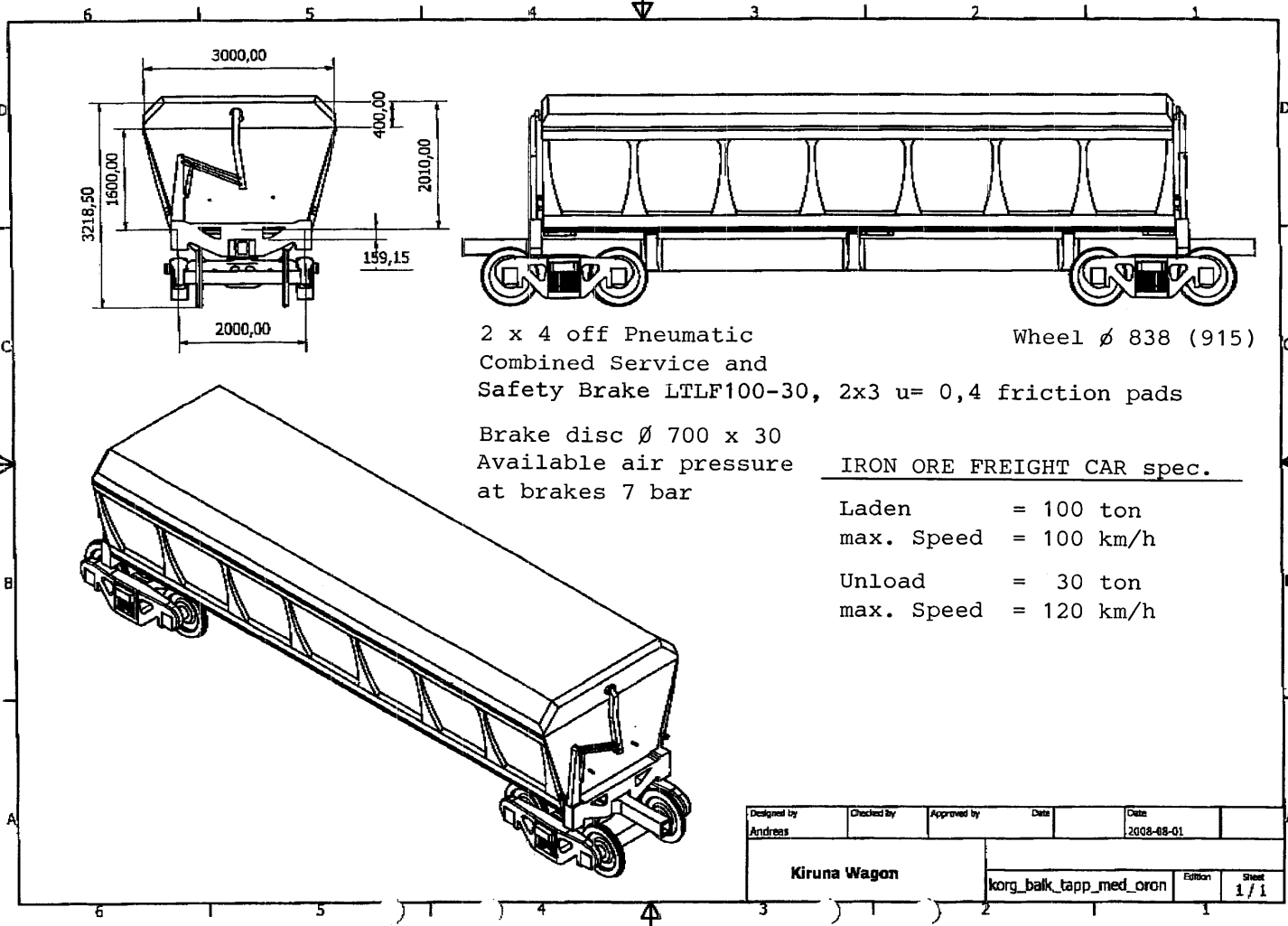
Brake disc \varnothing 700 x 30 mm
 Freight car wheel \varnothing 838 (915)

Friction linings power dissipation during stoppage laden from 100 km/h to standstill 0,53 kw/cm² each brake

LTLF100-30
 2x3 pads u= 0,4
Adjustment-free
 With release feature



F-375
 P. 026/034
 T-279
 +46 980 71874
 FRAN-LKAB KIRUNA
 13:26
 25-AUG-2008



2 x 4 off Pneumatic Combined Service and Safety Brake LTLF100-30, 2x3 u= 0,4 friction pads
 Wheel \varnothing 838 (915)

Brake disc \varnothing 700 x 30
 Available air pressure at brakes 7 bar

IRON ORE FREIGHT CAR spec.

Laden = 100 ton
 max. Speed = 100 km/h
 Unload = 30 ton
 max. Speed = 120 km/h

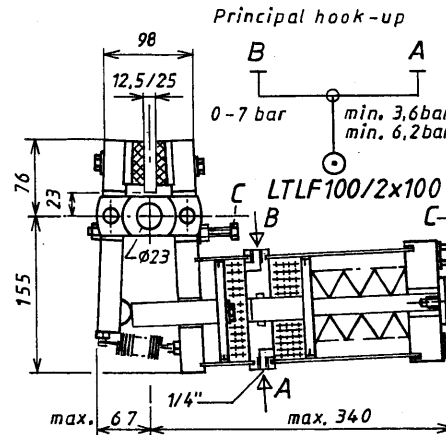
Designed by Andreas	Checked by	Approved by	Date	Date 2008-08-01
Kiruna Wagon			korg_balk_tapp_med_oron	Sheet 1 / 1
			Edition	

Combined Pneumatic/Spring Applied TWOSTOPP Brake LTLF100/2x100

EMPLOYMENT: Proportionate Braking Action with FAILSAFE back-up Feature
OPERATION: Inlet B > Service Brake
 Proportionate braking to applied air pressure
 Inlet A > Spring applied braking action
 In event of air supply line failure, power loss, parking or stationary holding the spring actuator applies the brake.
 (Exhaust A) FAILSAFE function carried out

Braking Force:
 5.850 N - 5 bar > Service Brake
 2.830 N - 0 bar > Spring Brake
 Release pressure 3,6 bar
 5.590 N - 0 bar > Spring Brake
 Release pressure 6,2 bar

NOTE: Adjustment-free brake spring
 Manual brake release device (C) provided



Färd- och Hållbromsning av rälsgodsvagn
 Slowing down and holding of rail freight car
 Verzögerungs- und Haltebremsung eines Güterwagens
 Freinage de ralentissement et maintien d'un wagon

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